

CTO 2003

INDUSTRY SECTOR REPORT

Empowering Nigerian Citizens Through Internet Services - Challenges and Prospects

BY

Mr. Chima Onyekwere
Founder & CEO, Linkserve Ltd.

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Agenda

- INTRODUCTION
- KSHHRLLLL...
Internet & www comes to Nigeria
- ROUGH AND TUMBLE
What the private sector has done in the market
- HELP WANTED
Challenges and how government policy can help
- CONCLUSION



Introduction

- Context

20 years ago in Nigeria, you were lucky if you had an electric typewriter with 1KB of memory, because in most offices, including even the multinationals, most people still used the manual *pound and shift* typewriter.

Then, executives depended on their typists to do their typing, and this of course doubled the time it took to get a simple letter out.



KSHHRLLL...

Internet & www comes to Nigeria

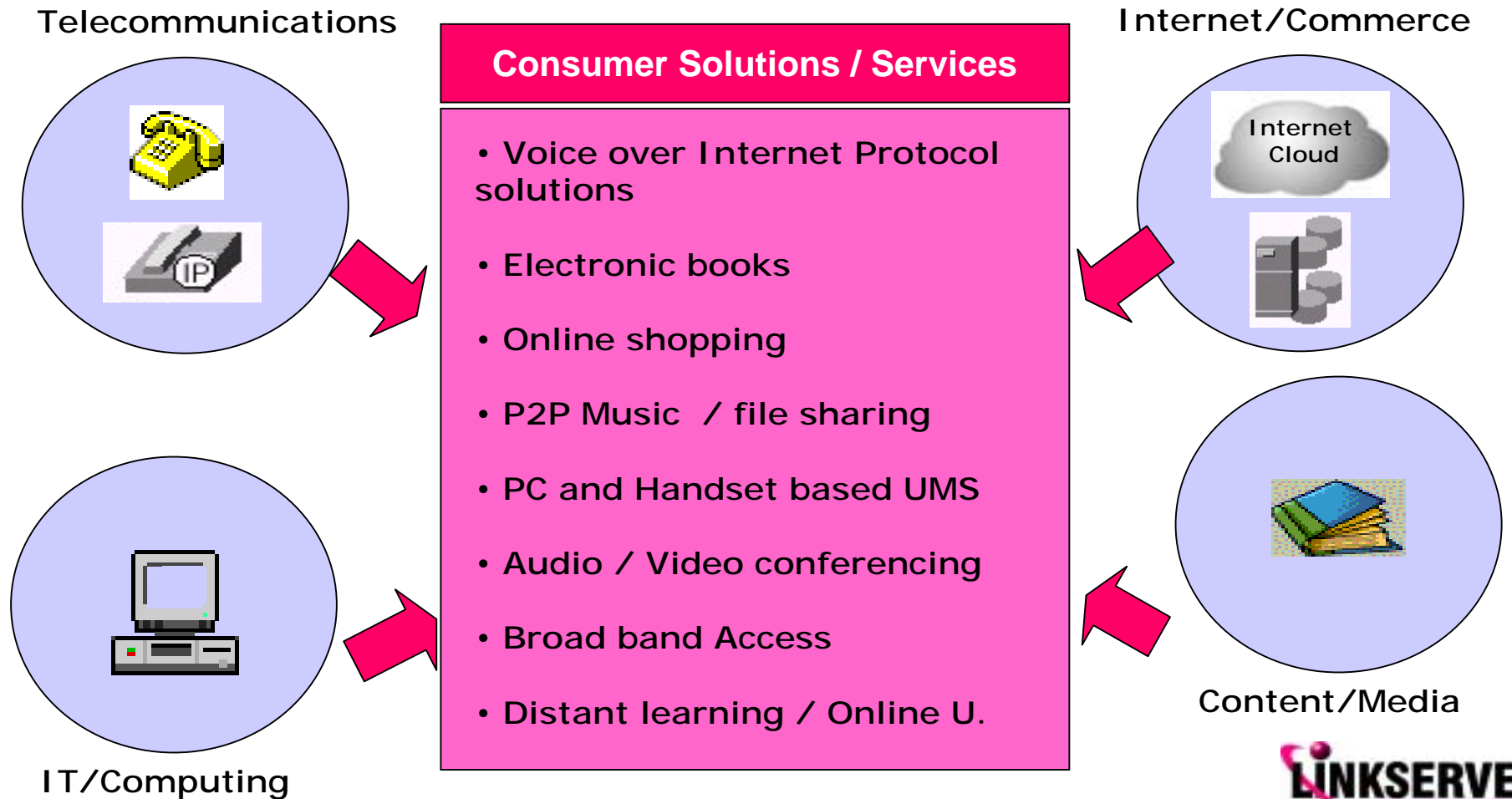


An Entrepreneur just trying to reduce cost

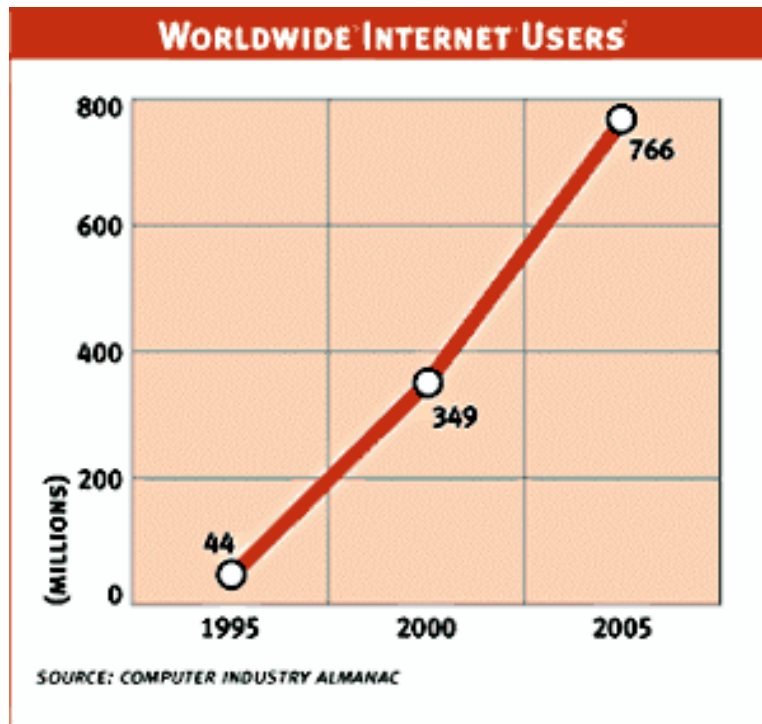
- Early Attempts in Internet
 - Focused on only email service
 - Using the store and forward format
- Real time connectivity achieved in 1996
 - Trying to reduce phone bill between my Lagos and London office
 - Exploration leads to a business opportunity
 - Real time Internet is borne
- Characteristics
 - Multiple services, mail, browsing, etc.
 - Real time connection
 - Minimal bandwidth



Why this topic is Apt



And the world is not waiting for Nigeria



**10 year CAGR
33 %**

Computer Industry Almanac -
Revised their numbers to
945M for 2004

- Numbers from the US
(Source: Forrester Research)
- US Global Online exports will top \$1.4 Trillion in 2004
- US Online import will top \$379 Billion in same period
- Domestic Internet transactions to exceed \$28B
(Ebay, Amazon, etc.)



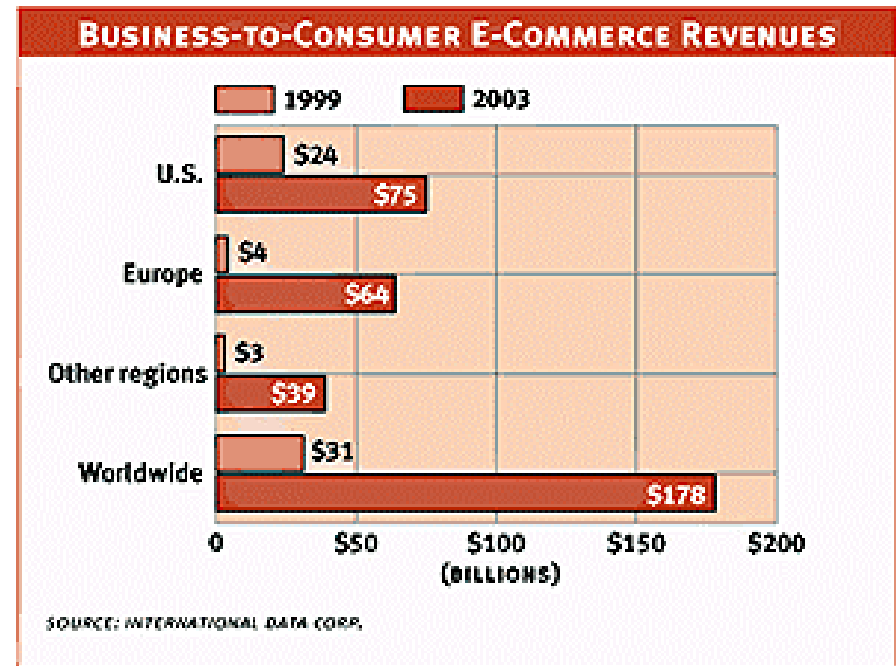
Empowering Nigerians

- Knowledge
 - Essential requirement for growth and happiness
- Education
 - Informal –Fastest growing alternative mass education option
 - Formal
 - Distance learning and Virtual classrooms
 - Academic Research for lecturers
 - Access to Materials and Library data
- Productivity and Efficiency
 - Time saving
 - Increase in output
 - Expanded applications
 - Better use of resources



Other Empowerment Benefits...

- Economic Growth
 - Growth in number of ISPs
 - Explosion of Cyber cafes
 - Other related services
- New Job Skills
 - University Trained, but no skills
 - On the job training
 - Other admin jobs in cafes
- E-Commerce
 - E-banking, already taking off in Nigeria
 - E-Procurement (**relevant in contract driven Nigeria**)
 - Marketing tool for basic presentment (storefront)



**4Yr. CAGR
55%**



...More Benefits

- Political Process
 - Access to and sharing of information by policy makers
 - Election monitoring, and uplifting democracy
 - Providing services to constituency, e.g. renew car licenses, etc.
- Health Care
 - Telemedicine, and Virtual specialist visits (from Abroad)
 - Online/Video Access to Specialists by Rural communities
 - Electronic diagnosis and examinations
- Communication & Social (**Early adopters**)
 - VoIP, Instant Messaging, Email, Video conferencing, etc.
 - Bridge Nigerians abroad and at home (Find a spouse program)
 - Other entertainment value applications



ROUGH AND TUMBLE...

What the private sector has done



Driven by Self motivating Entrepreneurs

- Seeking to solve own problems
 - Motivated by desire to just make it work
 - Expectation of high return
 - Flying in the dark
 - No where to get help
- The Industry in 1997/1998
 - Characterized by few players – Try 1 or 2
 - Single product - Dialup
 - Minimal bandwidth (probably a combined 128K)
 - Few customers
 - Lack of standards



Still a small Industry but Growing

- Industry Characteristics Today
 - At least 15 competitors, several more licensed
 - Multiple Products
 - Dialup / FWA / VSAT / DSL / etc.
 - Larger pool of bandwidth
 - Ranges of 512KB per firm to 30MB per firm
 - Several Thousand customers
 - Informal standards forming based on competitive pressure
 - E.g. Product packaging, Service delivery, etc.
 - The story of FWA
 - Broadband
 - Last mile problem solving
 - The Mast Pollution
 - NCC clean up efforts



Challenges and what we have tried to do

- High cost of bandwidth
 - Engage in backward integration to reduce cost/MB
 - Bypass broker and go to space segment directly
- Lack of capital
 - No recommendation. Just make friends with bank CEOs
- Lack of adequate last mile
 - NITEL E-1s. Making friends with the enemy (NITEL ISP)
- Lack of skilled engineer
 - Just reward the few you have well
- Power Problems
 - This is a headache. Be willing to spend on diesel



Still we are creating jobs via cafes

- **Linkserve VSAT**

- Universal Access in Nigeria
 - Penetrating all parts of Nigeria
 - Empowering individuals to start cyber cafes
 - Educating their communities
 - Connecting them to the world
- Enabling companies to work more efficiently
- Reliable network
- Low cost at under \$4,000 entry point

- **Linkserve Dialup**

- Universal Access in Nigeria
 - Same idea
 - Many POPs around the country
 - Very affordable Entry costs (N46,500/Yr. Or N5650/Month)



HELP WANTED...

How government policies can help



Issue details and Expected Interventions...

CHALLENGE	INTERVENTION
<ul style="list-style-type: none">• High Cost of Bandwidth	<ul style="list-style-type: none">• Subsidized pricing of SAT III• Build more Transatlantic cables<ul style="list-style-type: none">• Govt. or Consortium of banks
<ul style="list-style-type: none">• Lack of Long term Capital	<ul style="list-style-type: none">• Export orientation NOT Import• CBN could fund low rate funds• Commercial banks to be more creative
<ul style="list-style-type: none">• Not enough skilled Engineers	<ul style="list-style-type: none">• Scholarships to train more• Short term certification programs• Schools must use www to learn faster
<ul style="list-style-type: none">• Lack of good last mile options to the customer	<ul style="list-style-type: none">• NITEL and Globacom• NITEL and Globacom

...Issue details and Expected Interventions

CHALLENGE	INTERVENTION
<ul style="list-style-type: none">• Lack of collaboration between ISPs. (ISPs issue to manage)	<ul style="list-style-type: none">• Reduce cost of double hops• Create local Internet backbone<ul style="list-style-type: none">• Attract more users
<ul style="list-style-type: none">• Lack of Local Content (ISPs have a big role)	<ul style="list-style-type: none">• Develop the content market• Keep traffic local / Export traffic too• Reduce over all cost
<ul style="list-style-type: none">• Lack of Consistent Power supply	<ul style="list-style-type: none">• Privatize NEPA• License private power suppliers• Tax generator importation

Conclusion

- Countries have leveraged the new technologies to leap-frog their economies and succeeded
 - US leveraged the **Micro Chip** and dominated Computing
 - Japan leveraged **Integrated Circuit** and dominated Electronics
- The Internet is not the same, but gives us a good chance to build a better country
- The Internet and Internet Services is a very significant tool for Nigerians to take control of their destiny and in the process secure the future of this country, around:
 - Education and Knowledge
 - Economic
 - Political



THANKS

